REMARKS

Reconsideration of the application is respectfully requested for the following reasons:

1. Amendments to Claims

Claims 18-22, 43, and 49-51 have been amended to address the claim objections and rejections under 35 USC §§101 and 112, 2nd Paragraph, as described below.

In addition, claims 18-22, 43, and 49-51 have been amended to clarify the difference between "**learning information**" and "**learning operation information**." According to the invention, "learning operation information" is generated upon operating the terminal operating portion ***in response to*** the "learning information" (see page 91, lines 3-18). This learning operation consists of "**character information**," "**pointer information**," "**decision information**," and "**cancellation information**," as explained for example in the paragraph bridging pages 78 and 78 of the original specification and originally recited in claims 28-32 and 45 (which have now been canceled).

Because the amendments are all either formal in nature or clearly supported by the original specification, it is respectfully submitted that they do not involve "new matter."

In effect, as now claimed and as described in the original specification, the "learning operation information" is not the displayed images, but rather inputs by the student or instructor that are responsive to the displayed image. It is the learning operation information that is transmitted, rather than the image to which the generation of learning operation is responsive. For example, the "learning information" might be a list of test questions. The "learning operation information" is information might be information related to the student's movement of a pointer control device (mouse) to one of the check boxes next to a test question. This learning operation information is of course used to modify the original learning information display so that the student can see the result of using the point control device (the student sees

the checked box). However, according to the invention recited in claim 18, the instructor also sees the box being checked. Furthermore, according to various other claims, the instructor can not only see the box being checked, based on the transmission of "learning operation information," but can also see the student's facial expression and hear his or her voice as the box is being checked.

2. Objections to Claims 18-51

These objections have been addressed by adding the transitional term "comprising" to independent claims 18-22, 43, and 49-51, and further by adding line indentations between elements or steps. Withdrawal of the objections to claims 18-51 is accordingly requested.

3. Rejection of Claims 49-51 Under 35 USC §101

The Applicant believes that claims 49-51 as originally submitted clearly tied the claimed program to a machine. For example, originally submitted claim 49 recited "a student terminal having. . .a display portion and an operating portion," "a display step of displaying learning information. . .*on the display portion*," "a collecting step of sequentially connecting a learning operation information on the basis of operation *of the operating portion*," and a transmitting step of sequentially transmitting a signal. . .*in an instructor terminal*. The student terminal, display portion, operator portion, and instructor terminal recited in the body of claim 49 as originally recited are all hardware elements, and thus each of the program steps was specifically tied to a machine.

Even though the Applicant traversed the rejection under 35 USC §101 as applied to originally-submitted claims 49-51, claims 49-51 have been further amended to further recite that the program is implemented on the respective student of instructor terminals. It is respectfully submitted that amended claims 49-51 are clearly directed to statutory subject matter, since each of the program steps is clearly tied to a machine as required by the *Bilski* machine or transformation test. Withdrawal of the rejection of claims 49-51 under 35 USC §101 is therefore respectfully requested.

3. Rejection of Claims 49-51 Under 35 USC §112, 2nd Paragraph

This rejection has been addressed by amending claims 49-51 to clarify that the steps are carried out by program instructions implemented on the respective student and instructor terminals, and furthermore by deleting the objected-to "function of a display step" language. Withdrawal of the rejection of claims 49-51 under 35 USC §112, 2nd Paragraph is accordingly requested.

4. Rejection of Claims 18, 20, and 22 Under 35 USC §102(b) in view of U.S. Patent No. 4,715,818 (Shapiro)

This rejection is respectfully traversed on the grounds that the Shapiro patent fails to disclose or suggest a learning system, as claimed, in which "learning operation information" in the form of character or pointer inputs, decision information, or cancellation information responsive to displayed "learning information" is transmitted between student and instructor terminals so that the instructor can see the student's responses to the learning information as they occur (including cursor movements and input of characters from a keyboard), without having to actually transmit entire display images as in Shapiro.

It is respectfully submitted that the claimed transmission of "learning operation information" is not the same as the transmission of image displays disclosed by Shapiro. According to the invention, there is no need to transmit entire displays, thereby saving substantial bandwidth. This would not be a problem if only a static display were to be transmitted, but the invention does not provide a static display. Instead, the responses of the student to the displayed "learning information" are displayed on the instructor's terminal "sequentially:" so that, for example, the instructor can see the student's cursor being moved to the appropriate box on the test form as the cursor is being moved (and, as discussed below) also see the student's expression and hear his or her voice as this occurs). The effect is similar to watching a video capture of the student's display *and* of the student, and yet only a minimal amount of information needs to be transmitted.

In contrast, Shapiro merely transmits the sends the video signal from the student's display to the instructor and vice versa. There is no disclosure of transmitting "learning operation information" resulting from student responses to "learning information," as defined in amended claims. Accordingly, it is respectfully submitted that the Shapiro patent does not anticipate the claimed invention, and withdrawal of the rejection of claims 18, 20, and 22 under 35 USC §102(b) is respectfully requested.

5. Rejection of Claims 43 and 45 Under 35 USC §102(b) in view of U.S. Patent No. 6,115,840 (Sallette)

This rejection is respectfully traversed on the grounds that the Sallette patent (like the Shapiro patent discussed above) fails to disclose or suggest a learning server, as claimed, in which "learning operation information" in the form of character or pointer inputs, decision information, or cancellation information responsive to displayed "learning information" is transmitted by the learning server between student and instructor terminals so that the instructor can see the student's responses to the learning information as they occur. Instead, while Sallette does disclose use of an intermediate server, the server of Sallette is used for distributing streaming data feeds from various sources to a selected audience and not for transmission of learning control information, the only "feedback" provide for by Sallette being the ability to "poll" the audience concerning their responses to the data feeds.

Basically, the system of Sallette is concerned with the distribution of data feeds, with only limited individual feedback. There is no disclosure in Sallette of providing character, position, decision, or cancellation data for generating a display on an instructor's terminal in response to display control by individual audience members. Instead, all that is displayed are the responses to the polling. While the responses might take the form of messages (see col. 9, lines 5-23), there is no provision for transmitting control information of the type recited in claim 18, much less additional image or voice information as claimed. As a result, it is respectfully submitted that the Sallette patent does not anticipate the claimed invention, and withdrawal of the rejection of claims 43 and 45 under 35 USC §103(b) is respectfully requested.

6. Rejection of Claims 49-51 Under 35 USC §102(b) in view of U.S. Patent No. 5,176,520 (Hamilton)

This rejection is respectfully traversed on the grounds that the Hamilton patent (like the Shapiro and Sallette patents discussed above) fails to disclose or suggest a method, as claimed, in which "learning operation information" in the form of character or pointer inputs, decision information, or cancellation information responsive to displayed "learning information" is transmitted by the learning server between student and instructor terminals so that the instructor can see the student's responses to the learning information as they occur.

Unlike the Shapiro or Sallette patents, the Hamilton patent does disclose transmission of a type of "learning control information," in the form of stylus or light pen input coordinates. However, it is respectfully submitted that the stylus or light pen coordinates do not correspond to the claimed "at least one of character information resulting from operation of a keyboard, pointer information resulting from operation of a pointer moving device, decision information, and cancellation information." The reason is that the stylus or light pen does not input characters, and does not move a pointer, but rather is the pointer itself. Therefore, unlike the claimed invention, in which movement of the pointer (cursor) and/or input of characters can be seen by the instructor, Hamilton only allows the instructor see which box has been checked, *i.e.*, the end result of the student's input and not the process that led to that input (much less the student's face and voice as the process of responding is carried out). As a result, it is respectfully submitted that the Hamilton patent does not anticipate the claimed invention and withdrawal of the rejection of claims 49-51 under 35 USC §102(b) is respectfully requested.

7. Rejections of Claims 19, 21, 23-42, 44, and 46-48 Under 35 USC §103(a) in view of Various Combinations of the Shapiro Patent, Sallette Patent, Hamilton Patent, and U.S. Patent Nos. 6,288,753 (DeNicola) and 6,909,874 (Holtz)

These rejections are respectfully traversed on the grounds that the none of the cited patents discloses or suggests a system or server in which "learning operation information" in the form of character or pointer inputs, decision information, or cancellation information responsive to displayed "learning information" is transmitted by the learning server between student and

instructor terminals so that the instructor can see the student's responses to the learning information as they occur.

The differences between the claimed invention and the Shapiro, Sallette, and Hamilton patents is discussed above. In addition, the **DeNicola** patent discloses **use of video conferencing and blue screen technology to position an instruction in front of a variety of backgrounds**, rather than transmission of learning control information, as claimed (much less transmission of learning control information, video of the student (rather than instructor), *and* voice (again, of the student rather than the instructor), while the **Holtz** patent discloses an **interactive tutorial** that does not involve any sort of specific display control, much less display of learning control information, video, and voice from the student to the instructor (or *vice versa*). As a result, it is believed that each of the rejections of Claims 19, 21, 23-42, 44, and 46-48 under 35 USC §103(a) should be withdrawn.

Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

Respectfully submitted,

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